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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/709,770 | 05/27/2004 | Henry B. Crichlow | HC01 | 3769 |

27797 7590 03/24/2006

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| EXAMINER |
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DANG, HUNG Q

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| ART UNIT | PAPER NUMBER |
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2612

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/709,770

Applicant(s)

CRICHLLOW, HENRY B.

Examiner

Hung Q. Dang

Art Unit

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 May 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>5/27/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to because the boxes in figures 1-5 are not labeled. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 7-10, 14 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Sollinger U.S. Patent 4,811,011.

Regarding claims 1, 9, 14 and 16, Sollinger teaches a meter that measures the usage of a utility commodity and has a base and a removable cover (abstract), comprising:

(A) a replacement cover (column 2, lines 31-37) that fits onto said base, in the same manner as said removable cover (column 2, lines 20-22 indicates that the device 4 can be mounted within the transparent cover indicates that said cover is removable);

(B) a usage reader (column 2, lines 16-37; image scanner 4 is usage reader) inside said cover that obtains information on the amount of said utility that is used without making an electrical or mechanical connection to said meter;

(C) an automatic meter reader (Figure 1, unit 5; and column 3 lines 3-26; unit 5 is a meter reader), which comprises a microprocessor for storing information and calculating charges and a transmitter for transmitting information to a remote receiver (Figure 1, unit 14); and

(D) means for transferring information from said usage reader to said automatic meter reader (Figure 1 shows usage readers 4, 8 and 9 can transfer information to the automatic meter reader 5).

Regarding claim 2, Sollinger teaches that the preferably mounting position of said scanner is inside said meter, but said meter can also be mounted on (outside) said meter (column 2, lines 31-37).

Regarding claim 8, the utility usage disclosed by Solinger is also electric power.

Regarding claim 7, the transmitter disclosed by Sollinger also transmits information through a telephone line (column 3, lines 3-26; unit 11 is a telephone line).

Regarding claim 10, the cover taught by Sollinger is a transparent cover, so inherently, said cover is molded from clear plastic or glass.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sollinger U.S. Patent 4,811,011.

Regarding claim 3, Figure 1 of Sollinger shows a wire for transferring information from said usage reader to said automatic meter reader. One skilled in the art would recognize that in order for said wire to carry data from said usage reader (which is located inside the cover) to said meter reader through said wire, said wire has to pass through some sort of aperture in said cover to be in contact with said usage reader. Therefore, it would have been obvious to one skilled in the art at the time the

invention was made to provide an aperture in the cover of the meter disclosed by Sollinger for the reasons mentioned above.

Regarding claims 5 and 6, one skilled in the art would recognize that having said automatic meter reader **inside or outside** said replacement cover is merely the matter of having the components of said meter integral vs. separable to achieve optimal efficiency. Having said automatic meter reader outside the replacement cover would result in smaller size meter and also, said automatic meter reader can be used to read multiple readers; and having said automatic meter reader inside said replacement cover would result in one-single compact unit and no extra wiring outside of said meter needed. Therefore, having said automatic meter reader outside or inside said cover would have been obvious to one skilled in the art, in order to achieve desired purpose, as explained above.

Regarding claim 4, Sollinger teaches a system of claim 4, except wherein said means is a wireless connection between said usage reader and said automatic meter reader.

One skilled in the art would recognize that wireless communication has been conventionally used in meter reading systems and many other communication systems, in order to avoid the cost of using conducting cables and wiring said cables.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide wireless communication to the meter reading system

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disclosed by Sollinger to avoid the cost of using conducting cables and wiring said cables.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sollinger U.S. Patent 4,811,011 in view of Hunter U.S. Patent 6,622,097.

Regarding claim 15, Sollinger in view of Kirby teaches a system according to claim 15, except wherein said transmitter transmits information to the internet.

Hunter, in the same field of endeavor, teaches a metering system, which includes a communication system, such as internet, to allow communication from the meter reader/computer to the utility company for billing purposes or to allow the consumer to access and manage his power consumption from a remote computer (column 3, lines 54-58 and figure 9).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide data transmission over the internet to the metering system disclosed by Sollinger, as evidenced by Hunter, in order to allow communication from the meter reader/computer to the utility company for billing purposes or to allow the consumer to access and manage his power consumption from a remote computer.

7. Claims 11-13 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sollinger U.S. Patent 4,811,011 in view of Karpenko U.S. Patent 6,980,937.

Regarding claims 11-12, Sollinger in view of Kirby et al. teaches a system according to claim 11, except wherein said meter has a meter wheel, the angular velocity of which is proportional to the usage of said utility commodity.

As mentioned above, Sollinger teaches a meter, which as a scanner (camera), wherein the displayed metering data can be scanned or captured by said scanner and then transmitted to a remote location. This is just one out of many conventional methods to acquired metering data from a meter.

One skilled in the art would recognize that there are other methods such as using a meter wheel and wherein the usage reader is an optical pulse reader can be used to read metering data, as evidenced by Karpenko (paragraph bridging columns 4-5); and logically, the angular velocity of said meter wheel has to be proportional to the usage of said utility commodity.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to alternatively provide the optical meter reading method as claimed in claims 11-12 to the metering system disclosed by Sollinger, as evidenced by Karpenko, in order to acquired said metering data.

Regarding claim 13, even though, Sollinger in view of Karpenko does not specifically teach that the position of the optical pulse reader relative to the meter wheel is adjustable, however, one skilled in the art would recognize that optical readers optimally operate when located at the position with minimal surrounding light reflectance.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide the position of the optical reader disclosed by Solinger in view of Karpenko to be adjustable in order to achieve optimal meter reading, as explained above.

Claims 17-20 are rejected for the same reasons as claims 11-13.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Hung Q. Dang** whose telephone number is (571) 272-3069. The examiner can normally be reached on 9:30AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Wendy Garber** can be reached on (571) 272-7308. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Hung Q. Dang

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